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10/066,098	01/31/2002	Fabio Casati	10010118-1	6026

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EXAMINER

NASH, LASHANYA RENEE

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,098

Applicant(s)

CASATI ET AL.

Examiner

LaShanya R. Nash

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to an amendment filed 21 September 2006. Claims 1-26 are being considered wherein claims 21-23 are currently amended. Claims 24-26 are new.

Response to Arguments

Applicant's arguments filed 21 September 2006 have been fully considered but they are not persuasive. In considering the Applicant's arguments the following factual remarks are noted:

- (I) Applicant contends that there is no motivation or suggestion to combine the teachings of Acharya and Coupal.
- (II) Applicant contends that the references (i.e. Acharya and Coupal) when combined do not teach or suggest all elements of the claim.
- (III) Applicant contends that Acharya does not suggest selecting a conversation logic based on a returned service identifier.

In considering (I), Applicant contends that there is no motivation or suggestion to combine the teachings of Acharya and Coupal. In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)

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and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Acharya discloses employing multicast of packets to determined appropriate protocols associated with the services involved in a service discovery process. This implies that content comprising the multicast packets undergo a form of analysis in order for the protocol of the service to be derived by the service discovery proxy. In order to support this analysis as disclosed in the Acharya reference, there is sufficient suggestion to incorporate the protocol analyzer and protocol database of Coupal. As stated in the previous Office action, one of ordinary skill in the art would have been motivated to implement the teachings to Coupal in order to save the conversation logic within the database for efficient accessing and analyzing of various definition files, (Coupal; column 3, lines 55-67; column 4, lines 41-50).

In considering (II), Applicant contends that the references (i.e. Acharya and Coupal) when combined do not teach or suggest all elements of the claim. Applicant respectfully disagrees. Applicant argues that selecting the appropriate communication protocol to use for communicating with local devices is not the same as determining corresponding conversation logic based on the discovered service (Remarks, page 7). However, Examiner notes that Acharya discloses formatting the service discovery *responses* based on the discovered service and further according to the discovered services' protocols (paragraphs [0032]-[0033]). This is contrary to Applicant's assumption, as the selected services cannot provide a *response* to a discovery query *prior to being discovered*.

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Applicant also argues that Acharya does not disclose plugging in the determined conversation logic into the node of the workflow definition at run time. Examiner additionally notes that Acharya discloses modifying (i.e. plugging in) the aforementioned service discovery response so as to provide the necessary information enabling the user to utilize the service when it is to be executed (i.e. run-time), (paragraph [0031]). Therefore, Acharya suggests that the services' associated protocols (i.e. conversation logics) are needed in order for a user to properly employ and communicate with the aforementioned discovered service and the response is subsequently formatted to adhere to the appropriate protocol. As a result, Examiner asserts that the combination of Acharya and Coupal teach the elements of the claims as recited by Applicant. Therefore, Examiner maintains the rejections as set forth below in the Office action.

In considering (III), Applicant contends that Acharya does not suggest selecting a conversation logic based on a returned service identifier. Examiner respectfully disagrees. Examiner asserts that Acharya discloses that the service query responses are generated (paragraphs [0037]-[0038]), which are plugged with the conversation logics based on discovered services as shown in discussing (II), comprise "a list of services" and further containing information enabling the requester to utilize the discovered services (paragraphs [0031]-[0032]). Examiner asserts it is implied if not inherent in the Acharya reference, that the response must contain identifiers for each of the available services in order for the services to be listed. Furthermore the services must be identified in

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some manner in order for the requestor to utilize the appropriate service. As a result, Examiner that the references teach the elements of the claims as recited by Applicant. Therefore, Examiner maintains the rejections as set forth below in the Office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acharya et al. (US Patent Application Publication 2003/0140119), in view of Coupal et al. (US Patent 6,931,574), hereinafter referred to as Acharya and Coupal respectively.

In reference to claim 1, Acharya discloses a method for dynamic service discovery wherein conversation logic (i.e. protocol) for transmitting a workflow is selected dynamically (abstract). Acharya discloses:

- A method (Figures 5-6) for selecting a conversation logic (i.e. protocol) at run-time for a workflow definition that includes at least one node with no hard-coded conversation logic, (paragraphs [0017]-[0018]) the method comprising the steps of:

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- When executing the node with no hard-coded conversation logic, dynamically discovering a service associated with the node with no hard-coded conversation logic (i.e. dynamic service discovery; paragraphs [0028]-[0036]);
- Determining a corresponding conversation logic based on the discovered service, (paragraph [0037]); and
- Dynamically plugging in the determined conversation logic into the node at run time (i.e. formatting response; paragraphs [0031]-[0034]).

Although Acharya discloses substantial features of the claimed invention, the reference fails to expressly show maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition. Nonetheless, maintaining conversation logic repositories were well known in the art at the time of invention, as further evidenced by Coupal. Therefore, it would have been obvious for one of ordinary skill in the art to accordingly modify the aforementioned method as disclosed by Acharya.

In an analogous art, Coupal discloses a method for analyzing and interpreting conversation logic (i.e. protocol) in network communications (abstract). Coupal further discloses maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition (i.e. protocol database; Figure 1-item 34; column 8, line 15 to column 9, line 35). These modifications to the method as disclosed by Acharya would have been obvious because one of ordinary skill in the art would have been motivated to save conversation logic within the database for efficient accessing and

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analyzing of various definition files, (Coupal; column 3, lines 55-67; column 4, lines 41-50).

In reference to claim 3, Acharya discloses a method for dynamic service discovery wherein conversation logic (i.e. protocol) for transmitting a workflow is selected dynamically (abstract). Acharya discloses:

- A method (Figures 5-6) for selecting a conversation logic (i.e. protocol) at run-time (paragraphs [0017]-[0018]), comprising the steps of:
- At run-time, sending a service selection query (i.e. service query) to an electronic services platform or other service broker (i.e. service discovery proxy), (paragraphs [0028]-[0033]);
- Receiving a returned service identifier or reference (i.e. response; paragraphs [0028]-[0033]); and
- Selecting a conversation logic from the repository of conversation logics based on a returned service identifier, (paragraphs [0037]-[0038]).

Although Acharya discloses substantial features of the claimed inventions, the references fail to expressly show maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition. Nonetheless, maintaining conversation logic repositories were well known in the art at the time of invention, as further evidenced by Coupal. Therefore, it would have been obvious for one of ordinary skill in the art to accordingly modify the aforementioned method as disclosed by Acharya.

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In an analogous art, Coupal discloses a method for analyzing and interpreting conversation logic (i.e. protocol) in network communications (abstract). Coupal further discloses maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition (i.e. protocol database; Figure 1-item 34; column 8, line 15 to column 9, line 35). These modifications to the method as disclosed by Acharya would have been obvious because one of ordinary skill in the art would have been motivated to save conversation logic within the database for efficient accessing and analyzing of various definition files, (Coupal; column 3, lines 55-67; column 4, lines 41-50).

In reference to claim 11, Acharya discloses a system for dynamic service discovery wherein conversation logic (i.e. protocol) for transmitting a workflow is selected dynamically (abstract). Acharya discloses:

- A system (Figure 7) for dynamically selecting a conversation logic at run-time for a workflow definition that includes at least one node with no hard-coded conversation logic (paragraphs [0017]-[0018]), comprising:
- A workflow engine for processing workflow definitions (i.e. processing module; Figure 7-item 730; paragraphs [0028]-[0033]); and
- A dynamic conversation logic selection mechanism (i.e. service detector module; Figure 7-item 720) for receiving a service identifier that is associated with a service at run-time and based thereon for selecting a

conversation logic for interacting with the service at run-time, (paragraphs [0034]-[0038]).

Although Acharya discloses substantial features of the claimed invention, the reference fails to expressly show maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition. Nonetheless, maintaining conversation logic repositories were well known in the art at the time of invention, as further evidenced by Coupal. Therefore, it would have been obvious for one of ordinary skill in the art to accordingly modify the aforementioned method as disclosed by Acharya.

In an analogous art, Coupal discloses a method for analyzing and interpreting conversation logic (i.e. protocol) in network communications (abstract). Coupal further discloses maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition (i.e. protocol database; Figure 1-item 34; column 8, line 15 to column 9, line 35). These modifications to the method as disclosed by Acharya would have been obvious because one of ordinary skill in the art would have been motivated to save conversation logic within the database for efficient accessing and analyzing of various definition files, (Coupal; column 3, lines 55-67; column 4, lines 41-50).

In reference to claim 2, Acharya shows the method wherein the step of when executing the node with no hard-coded conversation logic, dynamically discovering a service associated with the node with no hard-coded conversation

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logic includes the steps of: determining a service based on a service selection rule (i.e. service discovery based on registry; paragraphs [0028]-[0030]); receiving a service reference (i.e. response; paragraphs [0032]-[0034]); and wherein the step of determining a corresponding conversation logic in the conversation logic repository based the discovered service further includes the steps of using the service reference to determine a conversation logic for the determined service, (paragraphs [0035]-0039)).

In reference to claims 4 and 15, Coupal shows the wherein each conversation logic is associated with at least one service, (Figure 4-item 60)

In reference to claims 5 and 16, Coupal shows the method wherein the conversation logic is for the exclusive use of a given composite service, (column 10, line 20-column 11, line 31)

In reference to claims 6 and 17, Coupal shows the method wherein the conversation logics is shared by two or more composite services (Figure 4-item 60).

In reference to claims 7 and 18, Coupal shows the method wherein the conversation logic is not defined in the workflow at process definition time (i.e. protocol definition file does not already exists; column 10, line 20-column 11, line 31).

In reference to claim 8, Acharya shows the method further comprising the step of: interacting with a dynamic service discovery mechanism (i.e. service detector module; Figure 7-item 720); and dynamically discovering services, (paragraphs [0035]-[0038]).

In reference to claims 9 and 19, Acharya shows the method further comprising the step of: performing late binding of the conversation logic at run-time, (i.e. dynamic; paragraphs [0031]-[0034]).

In reference to claims 10 and 20, Coupal shows the method wherein the repository is one of a single central database and multiple distributed files, (Figure 1-item 34; column 8, line 40-column 9, line 13).

In reference to claim 12, Acharya shows the system further comprising: d) a source for services; wherein the source discovers services based on a service selection rule; wherein the dynamic conversation logic selection mechanism (DCLSM) selects appropriate conversation logic from the conversation logic repository based on a discovered service, (paragraphs [0028]-[0037]).

In reference to claim 13, Acharya shows the system wherein the source for services is one of a service broker (i.e. service discovery proxy), a service marketplace, an e-services platform, a company, and an entity, (paragraphs

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[0028]-[0033]).

In reference to claim 14, Coupal shows the system wherein only services that have a conversation protocol compatible with one of the conversation logics available in the repository are selected, (i.e. protocol definition already exists; column 10, line 20-column 11, line 31).

In reference to claim 21, Coupal shows the conversion logic repository comprises plural conversation logic, and wherein determining the corresponding conversation logic comprises selecting one of the plural conversation logic based on the discovered service, (i.e. protocols selected based on definition constructs; column 12, line 38-column 13, line 42); and Acharya shows the at least one conversation logic comprises a specification of operations to be performed on the determined service (i.e. how to employ the service; paragraph [0038]).

In reference to claim 22, Coupal shows the conversation repository comprises plural conversation logic, and wherein selecting a conversion logic comprises selecting one of the plural conversation logic (i.e. protocols selected based on definition constructs; column 12, line 38-column 13, line 42); and Acharya shows the at least one conversation logic comprises a specification of operations to be performed on the determined service (i.e. how to employ the service; paragraph [0038]).

In reference to claim 23, Coupal shows the conversation logic repository includes plural conversation logic, and wherein the dynamic conversation logic selection mechanism selects one of the plural conversation logic that is associated with the service, (i.e. protocols selected based on definition constructs; column 12, line 38-column 13, line 42); and Acharya shows the at least one conversation logic comprises a specification of operations to be performed on the determined service (i.e. how to employ the service; paragraph [0038]).

In reference to claim 24, Acharya shows the at least one conversation logic comprises a specification of operations to be performed on the determined service (i.e. how to employ the service; paragraph [0038]).

In reference to claims 25-26, Acharya shows the at least on conversation logic comprises a specification of operations to be performed on a service identified by the returned service identifier (paragraphs [0031]-[0032]).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShanya R Nash whose telephone number is (571) 272-3957. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LaShanya Nash
Art Unit, 2153
November 29, 2006


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER